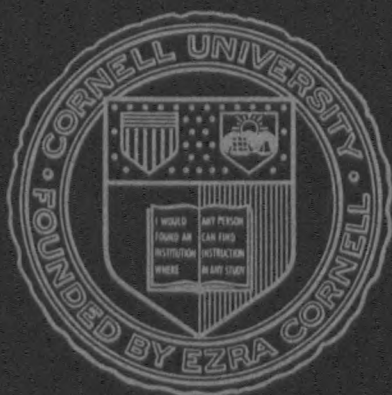


THE INSTITUTE REPORT



From the
VETERINARY VIRUS RESEARCH INSTITUTE
Cornell University, Ithaca, New York

September, 1973

Volume 23

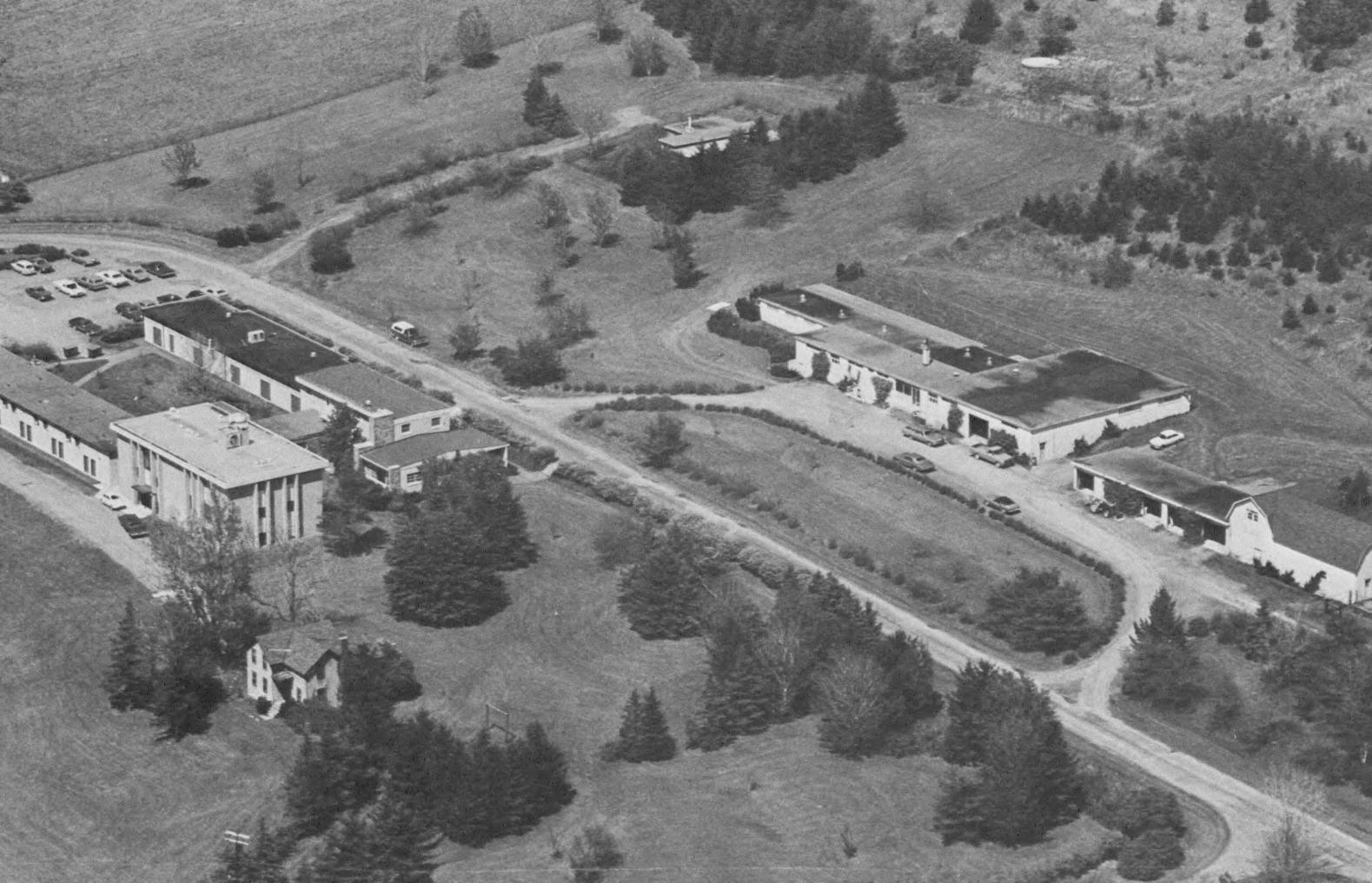
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From the
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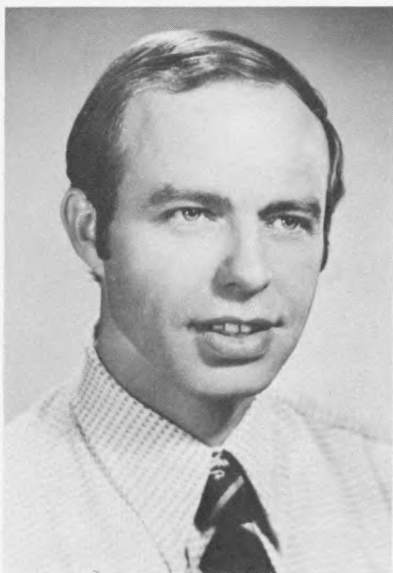
MESSAGE FROM THE DIRECTOR

OUR 23rd Annual Report has been prepared to give a brief but complete report of progress made during the past year to those whose support makes possible the work of the Cornell Research Laboratory for Diseases of Dogs.

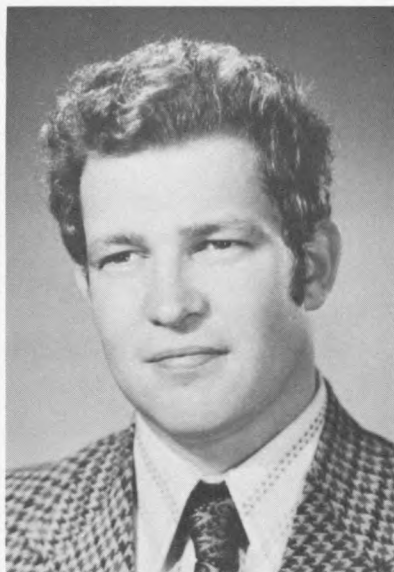
The Research Program: Each member of the staff reported good progress in his research program. There follows a brief summary of some results which seem worthy of your attention.

Studies of infectious diseases caused by viruses have continued. In these studies, more has been learned about the virus itself, not only its constitution, but the manner in which it affected dogs of various ages. Very young puppies responded differently from dogs of older age, and special conditions such as pregnancy, nutritional state, and hormone imbalance were shown to be important factors. Viruses studied have included canine distemper vaccine virus, infectious canine hepatitis virus (CAV 1) and a closely related virus (CAV 2), those viruses concerned with respiratory disease (CAV 2 and SV 5), canine herpesvirus, and the oral papilloma virus.

Studying the virus itself, however, has not been enough, and the immunological response of the dog from the time of conception until birth and thereafter has received attention. To accelerate this program, Assistant Professor Ronald Schultz has been added to the staff, New York State dog license fees making this possible. Immunological investigation has become very active, and it has been shown that there are at least two responses in recovery from infectious disease. One of these responses, recently recognized, has been termed cell-mediated immunity, meaning that certain cells make recovery possible. The other defense has been known for many years as antibodies which circulate in the blood stream. Greater understanding of these responses may permit more efficient vaccination to control disease.



Assistant Professor Ronald Schultz



Associate Professor George Lust

Use of the electron microscope has yielded much information in the study of eye disease caused by infectious canine hepatitis (CAV 1). A result of these electron microscope studies has been an understanding of the white eye condition which may follow natural disease or vaccination. In our search for a solution to this problem, substitution of a related virus, CAV 2 for CAV 1, has been found successful.

Study of infectious diseases caused by bacterial agents has been increased in scope. *Bordetella bronchisepticus*, a bacterium now recognized as a complicating infection of canine distemper, has been found in respiratory disease initiated by other viruses. A study of its full effects has begun. Canine brucellosis has continued to be a problem worthy of investigation. Three areas have been explored: 1) development of a simpler diagnostic test, and one has been developed; 2) immunity against canine brucellosis has been produced, but more work must be done before practical recommendations can be made; 3) adequate treatment has not been developed as yet.

Work on hip dysplasia conducted by Dr. George Lust has been directed toward a basic understanding of this problem. He has used the biochemical approach with the hope of finding means of earlier and better diagnosis.

Final diagnosis has depended upon radiographic methods, and the X-ray machine pictured in the last annual report has been of great help. In the search for causative factors, much information has been produced and published. The administration of Cornell University has recognized the value of this work by promoting Dr. Lust to Associate Professor.

A greatly expanded program on canine nutrition has been initiated. While it appears that currently available dog foods furnish good nutrition, further study of certain diet components seemed desirable. The nature of this work in canine nutrition is indicated by the project titles listed below:

Effect of Vitamin C on Host Response to Infectious Disease
Chronic Vitamin D Toxicity in Dogs
Carbohydrate Requirements of Dogs
Calcium in Canine Nutrition
Trace Element Requirements of Dogs
Nutritional Adequacy of Fortified All Meat and Commercial
Dry Dog Food



An amino acid analyzer operated by graduate research assistant Charles Banta in a study of nutritional requirements for puppy growth.

Education: Laboratory Report No. 3 entitled "Feeding to Meet Nutritional Needs of Dogs in 1973" has been mailed to each supporter of the Laboratory. This report was well received as indicated by a large number of complimentary letters and numerous requests for additional copies. Laboratory Reports No. 4 and No. 5 will explain infectious diseases of dogs. Newer knowledge of disease prevention and cure also will be discussed. These reports are in preparation and will be mailed during the coming year.

In Appreciation: For their exceptional interest in the Institute, we should like to express appreciation to the following: Mrs. Boyce Bailes, Dr. Louis A. Corwin, Sr., Mr. and Mrs. Gaylord Donnelley, Miss Gladys Freeman, Dr. Kenneth I. Gumaer, Mr. and Mrs. E. Roland Harriman, Mrs. Dorothy B. Howe, Dr. John J. Huckle, Dr. Grant Kaley, Mr. and Mrs. John Lafore, Mr. James A. Moffett, Mrs. Ann W. Olin, Mr. John M. Olin, Mr. Spencer T. Olin, Mrs. Vincent F. Wilcox, Mr. Robert W. Woodruff, and Mrs. Virginia Wooley.

The offer to become a Research Partner has produced a strong response among veterinarians. In fact, total support from the veterinary profession provided nearly sufficient funds to operate a division of the Laboratory.

Dog clubs throughout the United States have increased their support of the Laboratory. We believe this is largely the result of our educational policy of disseminating information through laboratory reports. This policy will continue.

The following pictures of check presentations typify continuing club support.



Mr. James Pyle, president of the Finger Lakes Kennel Club, presents a check to Dr. James A. Baker.



Mr. William Pappas, president of the Albany Kennel Club, Inc., presents a check to Dr. Max Appel.

BEQUESTS

With great regret, we record here the deaths of four people who, in their final thoughts, provided for research to improve the health of dogs.

MR. STANLEY K. DIMOCK

Because of our desire to learn as much as possible about Mr. Stanley K. Dimock and his interests in life we requested information from Mrs. Dimock. She was kind enough to give us some thoughts about her husband. He was a gentle man who derived great pleasure from the wonders of nature. His early interest in building small yachts and in exploring the waters of the Florida keys was supplanted in later life with great interest in animals. He was dedicated to providing for the welfare of dogs and placed great faith in Cornell University. Mr. Dimock demonstrated his confidence in the Cornell Research Laboratory for Diseases of Dogs by making it a beneficiary in his will.

MRS. MARTHA LAMBERT

At the time the Cornell Research Laboratory for Diseases of Dogs was founded, Mrs. Lambert and I met in New York City after she and her daughter, Frances, had sent a message that they wished to talk with me. As we talked, I realized that they truly loved dogs for their daily companionship. Over the years both Mrs. Lambert and Miss Lambert became great friends of the Laboratory. As an expression of their great love for dogs and of their high regard for the work of the Laboratory they have bequeathed their entire estates to it. Mrs. Lambert will be missed greatly.

MISS MARIE J. LEARY

Miss Leary has been described by a close friend as the most humane person she has ever known. Her Cosalta Kennels in Greenwich, Connecticut, were well known for the many German Shepherd champions bred there. Miss Leary also was recognized in Germany, where she obtained her original stock. She was very interested in the health and care of dogs and was concerned with the hip dysplasia problem. All of her dogs were X-rayed before they were sold. She was concerned as well with obedience in dogs. During World War II she organized classes to train German Shepherds for use by the United States Coast Guard. She was an internationally known judge of dogs, having judged not only throughout the United States but in Europe and in South America as well.

MISS F. JULIA SHEARER

Meander Farm in Virginia Piedmont Country was the home of Julia and Judith Shearer. Here they bred and trained outstanding horses and dogs. They were known especially for their Whippets, producing at least 50 champions. The Shearer name was well known and highly respected in showing and judging on the dog show circuit. We have been told that these gentle and gracious ladies possessed wonderful senses of humor and worked together in perfect harmony. Proceeds from their entire estates were left to help the animals they loved so much. Many friends have honored them by contributing to the Cornell Research Laboratory for Diseases of Dogs in their memory.

Financial Situation: In the fiscal year 1971-72, \$108,715 of reserve funds were required to balance the budget. This deficit resulted mainly from an unavoidable delay in availability of New York State dog license fee monies. It was anticipated that the budget would be balanced in fiscal year 1972-73, but inflation interfered, particularly in salary adjustments. The budget was not balanced, but the drain on reserves was reduced to \$75,384. If support increases at the present rate, we can anticipate a balanced budget next year.

Financial situation July 1, 1972-June 30, 1973

FUNDS AVAILABLE

Contributions and earnings budgeted	\$275,000.00
State of New York general support	110,357.00
State of New York dog license fees	144,043.00
Federal grant (terminated February 1973)	19,141.00
Allen Products Company grant	47,700.00
	<hr/>
	\$596,241.00

EXPENDITURES

Salaries	\$407,519.00
Operational costs	264,106.00
	<hr/>
	\$671,625.00
Reserves used to balance budget	\$ 75,384.00

To assure donors of funds for research for dogs that their funds will support such research, currently or in the future, the Cornell University Board of Trustees made a provision for disposal of excess income as follows: "The Institute's income is in excess of its operating expense, and the balance of the funds is added to the Institute's Endowment."

VIRUS RESEARCH INSTITUTE STAFF

JAMES A. BAKER, B.S., M.S., Louisiana State University; D.V.M., Ph.D., Cornell. Professor of Virology and Director of the Institute.

BEN E. SHEFFY, B.S., M.S., Ph.D., Wisconsin. Caspary Professor of Nutrition and Assistant Director of the Institute.

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MARY L. O'BRIEN, Account Clerk.

JEAN REINBOLD, B.S., Elmira College; Cornell. Administrative Assistant.

ANN W. SIGNORE, Cornell. Secretary.

HADLEY C. STEPHENSON, B.S., D.V.M., Cornell. (Professor Emeritus of Veterinary Therapeutics and Small Animal Diseases), Veterinary Consultant.

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CHARLES BAILOR, Animal Technician.

PAUL BELDEN, B.S., Cornell. Laboratory Technician.

KENNETH BONDIOLI, B.S., Cornell. Laboratory Technician.

CLARENCE CAPLE, Farmer.

BERNARD L. CLARK, Research Technician.

GERALD HILLER, Animal Technician.

LLOYD TOTMAN, Animal Technician.

MAINTENANCE

JAMES HARDY, B.S., Cornell. Research Technician.

ELDON MEAD, Mechanic.

FRANK SEARS, Building Maintenance Supervisor.

MICHAEL VAUGHN, Maintenance Helper.

EDSON WHEELER, Senior Mechanic.

MICROBIOLOGY LABORATORIES

LELAND E. CARMICHAEL, A.B., D.V.M., California; Ph.D., Cornell. John M. Olin Professor of Virology.

JEAN C. JOUBERT, Laboratory Technician.

BEVERLY S. MEDIC, B.S., Pennsylvania State University. Laboratory Technician.

VIVIAN MORGAN, Laboratory Assistant.

DOUGLAS S. ROBSON, B.S., M.A., Iowa State University; Ph.D., Cornell. Consultant in Statistics.

ELIZABETH WHEELER, Laboratory Assistant.

SPECIAL LABORATORIES

Biochemistry Laboratory (Provided by Mr. John M. Olin):

GEORGE LUST, B.S., University of Massachusetts; Ph.D., Cornell. Associate Professor of Biochemistry.

WALTER PRONSKY, B.S., Cornell. Laboratory Technician.

Brucellosis Laboratory (Operating funds provided by the American Kennel Club):

LISLE GEORGE, B.S., Pennsylvania State University; D.V.M., Cornell. Research Assistant.

CHI-KUANG KING, B.E., National Taiwan Normal University; M.S., Winthrop College. Laboratory Technician.

Colgate Division for Tissue Culture (Established by the late Miss Adele S. Colgate):

RANDA BEST, R.N., Robert Packer Hospital. Laboratory Technician.

FREDERICK A. HINMAN, B.A., Ithaca College. Laboratory Technician.

Daynemouth Division (Established by the late Colonel and Mrs. Lee Garnett Day):

LINCOLN S. ADAMS, B.S., Hobart College. Laboratory Technician.

RONALD D. SCHULTZ, B.S., M.S., Ph.D., Pennsylvania State University. Assistant Professor of Immunology.

Giralda Division (Established by the late Mrs. Geraldine Rockefeller Dodge):

CHARLES A. BANTA, B.S., Pennsylvania State University; M.S., Cornell. Research Assistant.

MARY M. KRINSKY, B.S., Iowa State University; M.Ph., Ph.D., Yale University. Laboratory Technician.

ALMA WILLIAMS, B.A., Pennsylvania; M.S., Cornell. Laboratory Technician.

Oswald R. Jones Laboratory (Established in honor of the late Dr. Oswald R. Jones):

D. HUGH DAVIES, B.V.S., Massey University, New Zealand. Research Assistant.

SUSAN G. ELY, B.A., Keuka College. Laboratory Technician.

Richard King Mellon Electron Microscopy Laboratory (Provided by Mellon Foundation):

MAX J. G. APPEL, Dr. med. vet., University of Hannover; Ph.D., Cornell. Associate Professor of Microbiology.

DAVID A. BEMIS, B.S., Cornell. Research Assistant.

NINA Y. LIANG, B.S., National Tsing Hua University, Taiwan; M.S., Duquesne University. Laboratory Technician.

HELEN A. WILTBERGER, B.S., M.S., Ph.D., Cornell. Experimentalist.

COOPERATING STAFF

These doctors of veterinary medicine in various parts of the United States are contributing much time and effort, without compensation, in order to help secure necessary information on which to base programs for control of infectious diseases.

BALDWIN KING, JR., D.V.M., Albany, Georgia.

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WALTER D. MARTIN, JR., D.V.M., Albany, Georgia.

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THOMAS L. SHORE, D.V.M., St. Louis, Missouri.

H. GRADY YOUNG, D.V.M., Thomasville, Georgia.

LEON YOUNG, D.V.M., Thomasville, Georgia.

PUBLICATIONS FROM THE VETERINARY VIRUS RESEARCH INSTITUTE

Publications for the first ten years were listed in the Institute Report for 1960. Those for each following year were listed in its annual report. Since 1960, articles have been numbered consecutively. Some of the following numbers were listed in previous years' reports as "accepted" or "in press." They are repeated this year, with their original numbers, in order to record the volume and page references. Articles numbered 289-303 are those completed during the past year.

- (271) AGUIRRE, G. D., RUBIN, L. F., and BISTNER, S. I.: The development of the canine eye. *Amer. Jour. Vet. Res.*, 1972, 33, No. 12, 2399-2414.
- (272) AGUIRRE, G. D. and BISTNER, S. I.: Posterior lenticonus in the dog. *Cornell Vet.*, 1973, 63, No. 3, 455-461.
- (274) APPEL, M. J. G., BISTNER, S. I., MENEGUS, M., and CARMICHAEL, L. E.: Pathogenicity of low-virulence strains of two canine adenovirus types. *Amer. Jour. Vet. Res.*, 1973, 34, 543-550.
- (276) BISTNER, S. I., RUBIN, L. F., and AGUIRRE, G. D.: Contributions to the development of the bovine eye. *Amer. Jour. Vet. Res.*, 1973, 34, 7-12.
- (277) CARMICHAEL, L. E.: Identification of a canine adenovirus (infectious canine hepatitis virus) inhibitor in dog liver extracts as arginase. *Infect. Immunity*, 1972, 6, 348-354.
- (278) CARMICHAEL, L. E., ST. GEORGE, T. D., SULLIVAN, N. D., and HORSFALL, N.: Isolation, propagation, and characterization studies of an ovine mycoplasma responsible for proliferative interstitial pneumonia. *Cornell Vet.*, 1972, 62, 654-679.
- (279) LEE, HELEN H. and TINSLEY, T. W.: Inhibition of certain deoxyribonucleic viruses by liver extracts. *Infect. Immunity*, 1972, 6, 427-430.
- (281) LUST, G., CRAIG, P. H., ROSS, G. E., Jr., and GEARY, J. C.: Studies on pectineus muscles in canine hip dysplasia. *Cornell Vet.*, 1972, 62, 928-945.
- (282) LUST, G. and PRONSKY, W.: Glycosaminoglycan contents of normal and degenerative articular cartilage from dogs. *Clinica Chimica Acta*, 1972, 39, 281-286.
- (283) LUST, G., PRONSKY, W., and SHERMAN, D. M.: Biochemical studies on developing canine hip joints. *Jour. Bone and Joint Surgery*, 1972, 54-A, No. 5, 986-992.
- (287) SHEFFY, B. E.: Feeding puppies and bitches. *Canine Nutrition*. Ed. by D. S. Kronfeld. Univ. of Pennsylvania, Sch. Vet. Med., 1972, 18-21.
- (287A) SHEFFY, B. E.: Cachexia and obesity. *Canine Nutrition*. Ed. by D. S. Kronfeld. Univ. of Pennsylvania, Sch. Vet. Med., 1972, 22-25.
- (287B) SHEFFY, B. E.: Nutrition and infection. *Canine Nutrition*. Ed. by D. S. Kronfeld. Univ. of Pennsylvania, Sch. Vet. Med., 1972, 55-61.
- (289) AGUIRRE, G. D., CARMICHAEL, L. E., and BISTNER, S. I.: An ultrastructural study of changes in the anterior segment of the eye of dogs with canine adenovirus type 1 infection. *Invest. Ophthalm.* Submitted for publication, 1973.
- (290) APPEL, M. and ROBSON, D. S.: A micro-neutralization test for canine distemper virus. *Amer. Jour. Vet. Res.*, 1973. In press.
- (291) APPEL, M.: Diagnosis of canine distemper. *Tribuna Veterinaria*, 1972, 3, 3.
- (292) CARMICHAEL, L. E.: Canine herpesvirus in neonatal pups. Chapter in *Current Vet. Therapy V*. W. B. Saunders and Co., Philadelphia. Accepted for publication, 1974.
- (293) CARMICHAEL, L. E.: Canine adenovirus infection. Chapter in *Current Vet. Therapy V*. W. B. Saunders and Co., Philadelphia. Accepted for publication, 1974.

- (294) DAVIES, D. H. and CARMICHAEL, L. E.: Role of cell-mediated immunity in the recovery of cattle from primary and recurrent infections with infectious bovine rhinotracheitis virus. *Infect. Immunity*, 1973. In press.
- (295) DAVIES, D. H. and DUNCAN, J. R.: The pathogenesis of recurrent infections with infectious bovine rhinotracheitis virus induced in calves by treatment with corticosteroids. *Cornell Vet.* Submitted for publication, 1973.
- (296) DAVIES, D. H., Duncan, J. R., et. al.: The identification of a humoral suppressor of *in-vitro* lymphocyte transformation responses in cattle with Johne's disease and a calf with a severe infection with the wart virus. Manuscript in preparation, 1973.
- (297) DAVIES, D. H.: The pathogenesis of recurrent infections with infectious bovine rhinotracheitis virus in cattle. Ph.D. thesis, Cornell University, August, 1973.
- (298) LUST, G., PRONSKY, W., and SHERMAN, D. M.: Biochemical and ultrastructural observations in normal and degenerative canine articular cartilage. *Amer. Jour. Vet. Res.*, 1972, 33, No. 12, 2429-2440.
- (299) LUST, G., GEARY, J. C., and SHEFFY, B. E.: Development of hip dysplasia in dogs. *Amer. Jour. Vet. Res.*, 1973, 34, No. 1, 87-91.
- (300) LUST, G. and SHERMAN, D. M.: Metabolic and ultrastructural studies on articular cartilage of developing canine hip joints. *Cornell Vet.*, 1972, 63, 94-105.
- (301) SCHULTZ, R. D.: Autoimmune and immunologic deficiency diseases in dogs and cats: Diagnosis. *Veterinary Clinics of North America*. W. B. Saunders and Co., Philadelphia. Accepted for publication, 1974.
- (302) SHEFFY, B. E.: Feeding to meet nutritional needs of dogs in 1973. *Laboratory Report, Series 2*, No. 3. March, 1973.
- (303) SHEFFY, B. E. and RODMAN, S.: Activation of latent IBR infection. *J.A.V.M.A.*, 1973. In press.



This electron photomicrograph shows crystalline arrays of canine wart virus particles within the nucleus of a cell from a wart on the tongue of a puppy. Arrows indicate the arrays of virus particles. The cell is magnified 13,500 times.

Canine oral papillomas (warts) may cause serious problems in breeding kennels, and they may progress to oral cancer. Very little is known about this problem, and a study to learn more has begun.

ACKNOWLEDGMENTS

The Cornell Research Laboratory for Diseases of Dogs gratefully acknowledges gifts received from our contributors from September 1, 1972 to September 1, 1973 in support of our research program.

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- ***Mason Dixon Kennel Club, Inc.
- Merrimac Dog Training Club
- Middleburg Hunt
- Midwest Field Trial Club
- Minnesota Field Trial Association, Inc.
- *Mohawk Valley Kennel Club, Inc.
- (In Honor of Dr. A. J. Friderici)
- *Monmouth County Kennel Club, Inc.
- Nassau Dog Training Club, Inc.
- *National Amateur Retriever Club
- *National Beagle Club
- **National Retriever Club, Inc.
- *New Brunswick Kennel Club
- *New England Dog Training Club, Inc.
- New Jersey Boxer Club, Inc.
- New Mexico Kennel Club
- North Shore Kennel Club, Inc.
- *Norwegian Elkhound Association of America
- *Norwich Terrier Club
- *Obedience Training Club of Hawaii, Inc.
- **Onondaga Kennel Association, Inc.
- *Ox Ridge Kennel Club
- Patroon Dog Training Club, Inc.
- (In Honor of Dr. Robert B. Lamb)
- Pembroke Welsh Corgi Club of America, Inc.
- *Penn Ridge Kennel Club, Inc.
- Piedmont Kennel Club
- (In Memory of Mrs. Geoffrey H. Sutcliffe)
- Port Chester Obedience Club
- *The Progressive Dog Club
- Rogue Valley Retriever Club
- Rombout Hunt
- *Rubber City Kennel Club
- *Sagehen's Retriever Club
- Salem Retriever Trial Club
- San Antonio Kennel Club, Inc.
- *Saw Mill River Kennel Club
- Shohi Kumiai (Cooperative Society)
- Shreveport Kennel Club, Inc.
- **Silver State Kennel Club
- Somerset County Dog Obedience Club, Inc.
- **Somerset Hills Kennel Club
- *Southern Adirondack Dog Club, Inc.
- *South Shore Dog Training Club, Inc.
- South Texas Obedience Club
- (In Memory of Mr. Richard H. D'Ambrisi)
- **Spartanburg Kennel Club
- *Sugarbush Kennel Club, Inc.
- *Sussex Hills Kennel Club, Inc.
- **Thronateeska Kennel Club
- *Toledo Kennel Club, Inc.
- *Tonawanda Valley Kennel Club
- **Trenton Kennel Club
- Trumbull County Kennel Club, Inc.
- ***Twin Brooks Kennel Club
- *United Kennel Club
- *Utica Dog Training Club, Inc.
- **Washington State Obedience Training Club, Inc.
- Waterloo Kennel Club

IN MEMORIAM

Mrs. Leonard W. Bonney
Mr. Richard H. D'Ambrisi
Dr. Arthur C. Davidson
Mr. Stanley K. Dimock
Mrs. Geraldine Rockefeller Dodge
Dr. Ralph T. Ellison
Colonel Burt English
Dr. Richard A. Fish
Dr. Hyman W. Gardner
Dr. Oby Jared Hoag
Dr. Lyman L. Hoy
Mrs. Martha Lambert
Miss Marie J. Leary

Dr. Samuel J. Levine
Mrs. William H. Long, Jr.
Dr. Frank McBride
Mr. Kenneth McDonald
Mrs. Harvey W. Myers
Dr. C. Harry Payne
Dr. William G. Robens
Mrs. Elsie T. Sanderson
Miss F. Julia Shearer
Miss Judith R. Shearer
Mr. Frank D. Smith
Mrs. Anne H. Soreghen
Mrs. Geoffrey H. Sutcliffe

Mrs. Geraldine Rockefeller Dodge

Mrs. Geraldine Rockefeller Dodge died at the age of 91 on August 13, 1973 at her home, Giralda Farms, in Madison, New Jersey. Mrs. Dodge will be remembered for the many ways in which she promoted the welfare of dogs. With her husband, M. Hartley Dodge, she founded the Morris and Essex Kennel Club, which sponsored the famous Morris and Essex Dog Show held on the grounds of Giralda Farms. She was one of the great breeders of German Shepherds, producing many champions. She co-authored a book "The German Shepherd Dog in America." She expressed a sincere interest in all dogs by establishing St. Hubert's Giralda, a dog warden service for Morris County.

In 1950, the Board of Trustees of Cornell University was urged by many dog owners to establish a research laboratory to study diseases of dogs with the aim of preventing great losses then occurring. As one of the country's leading dog fanciers, Mrs. Dodge was invited to help establish this laboratory. After several discussions, she agreed to support it financially and to help shape its future goals. To show her faith in research, she established the Giralda Division of the Cornell Research Laboratory for Diseases of Dogs. In the Giralda Division was established the first tissue culture laboratory in any veterinary college in the world. Mrs. Dodge was happy to have played a role in the development of this valuable new scientific method which substituted living cells in test tubes for the older method of using living animals. Many famous scientists and teachers have received their training in this method at the Laboratory. Mrs. Dodge had a fine appreciation of the scientific method of solving disease problems and made many constructive suggestions. The Giralda Division will continue its work as she had planned.



KING BUCK

April 3, 1948 - March 28, 1962

A sculpture of King Buck by Jas. L. Clark given by John M. Olin to the Cornell Research Laboratory for Diseases of Dogs in 1972.

A brief summary of the record of this remarkable Labrador was provided by Mr. Olin.

"During his years at Nilo, King Buck finished 73 series of a possible 75 in seven consecutive runnings of the National Championship Stake. The only series that he failed to complete in those seven 'Nationals' were the eleventh series in the 1951 contest and the twelfth series in 1957. *No other retriever in history has successfully completed 63 consecutive series in the National Championship Stake.*

"He also completed ten series for handler John Olin in the 1957 American Amateur Retriever Trial, establishing a brilliant record of 83 completed series of a possible total of 85 series in national championship competition, including two successive national crowns!"

In establishing the Institute, of which the Cornell Research Laboratory for Diseases of Dogs is a part, the Board of Trustees authorized the Treasurer's Office of Cornell University to act as custodian of all funds given in support of the Institute. Donors, therefore, are assured of maximum benefit from their gifts by means of this supervision by Cornell University officials. Cornell welcomes any gifts or bequests that will help the work of the Institute. The Legal Department of Cornell University suggests the following provision in making a bequest for dog research:

"I hereby give, devise and bequeath (*description of property*) to Cornell University, an educational corporation located at Ithaca, New York, for the uses and purposes of the Cornell Research Laboratory for Diseases of Dogs."

All checks should be made payable to Cornell University and should be mailed to:

Office of the Director
Veterinary Virus Research Institute
Cornell University
Ithaca, New York 14850

